1. Flip three coins. Then draw with replacement from a word (specified below) until you get **one more vowel than the number of heads you got**. The word to be used also depends on the number of heads thrown:

<table>
<thead>
<tr>
<th>Number of heads thrown</th>
<th>Word to use</th>
</tr>
</thead>
<tbody>
<tr>
<td>0H</td>
<td>LION</td>
</tr>
<tr>
<td>1H</td>
<td>HIPPO</td>
</tr>
<tr>
<td>2H</td>
<td>OSTRICH</td>
</tr>
<tr>
<td>3H</td>
<td>ELEPHANT</td>
</tr>
</tbody>
</table>

What is the expected number of letters drawn?

2. Find
   a) the expected value
   b) the variance
   for the number of suits in a 6-card hand.

3. Find
   a) the expected value
   b) the variance
   for the number of aces in a 6-card hand.

4. An urn contains 9 balls each of 7 different colors. Draw 5 times with replacement. Find the
   a) the expected value
   b) the variance
   for the number of different colors drawn.

5. A 500-page book has 325 misprints. What is the probability there are at least two misprints on page 79?